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DATE: September 30, 2003

TOTAL # OF PAGES:
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TO: Examiner Janice Q. Li

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COMMENTS:

To: Examiner Janice Q. Li

For: US Patent Application Ser. No. 09/515,582

Title: Methods for Enhancing Graft Survival by Modulating Heme-Oxygenase Activity

Enclosures:

- (1) Supplemental IDS (2 pages)
- (2) Substitute for Form 1449 (2 pages)

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REFERENCE #

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PATENT

Attorney Docket No.: A-63708-5/RFT/TAL/CYO

Attorney Client Matter No.: 465840-00245

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re application of:

BUELOW *et al.*

Serial No. 09/515,582

Filed: February 29, 2000

For: *METHODS FOR ENHANCING
GRAFT SURVIVAL BY
MODULATING HEME
OXYGENASE ACTIVITY*


Examiner: Li, Qian J.

Art Group No. 1632

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Sir:

In satisfaction of the duty of disclosure under 37 C.F.R. § 1.56, and in accordance with the provisions of 37 C.F.R. §§ 1.97 and 1.98, Applicants wish to make formally of record in this case references cited on the accompanying Substitute for Form 1449. Copies of references C1-C13 were provided by Applicants in the response filed June 26, 2002. Accordingly, copies of references are not enclosed.

None of the foregoing references are believed to disclose the invention as claimed. Nothing herein shall constitute an admission concerning the contents of any of the cited references, nor shall the inclusion of a reference herein be considered an admission that the reference constitutes prior art against the invention claimed in the above-identified application. Submission of the present document shall not be construed as an admission that a search has been made or that better art does not exist.

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Filing Date: February 29, 2000

The Commissioner is authorized to charge any necessary fees which may be required, including any required fees under 37 CFR § 1.97, or credit any overpayment to Deposit Account No. 50-2319 (Our Order No. A-63708-5 (465840-00245)/RFT/TAL/CYO).

Please direct any calls in connection with this application to the undersigned at (415) 781-1989.

Respectfully submitted,

DORSEY & WHITNEY, LLP

Dated:

September 30, 2003

By:



Euk Y. Oh, Reg. No. 54,345 for
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Substitute for form 1449A/PTO (Modified) INFORMATION DISCLOSURE STATEMENT BY APPLICANT (use as many sheets as necessary)			Complete if Known	
			Application Number	09/515,582
			Filing Date	02/29/2000
			First Named Inventor	Buelow, R.
			Group Art Unit	1632
			Examiner Name	Li, Q. J.
Sheet 1 of 2	Attorney Docket Number	A-63708-5/TAL/CYO		

U.S. PATENT DOCUMENTS					
Examiner Initials*	Cite No.	U.S. Patent Document Number-Kind Code ² (if known)	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear
	A1				
	A2				
	A3				
	A4				
	A5				
	A6				
	A7				
	A8				
	A9				

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	B1					
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	C1	Evans, C-O et al., "Cloning and sequencing and expression of cDNA for chick liver haem oxygenase: comparison of avian and mammalian cDNAs and deduced protein," <i>Biochem J.</i> 273:659-666 (1991).				
	C2	Yoshida, et al., "Human heme oxygenase cDNA and induction of its mRNA by hemin," <i>Eur. J. Biochem.</i> 171:457-461 (1988)				
	C3	Ishikawa, K. et al., "Expression of rat heme oxygenase in <i>Escherichia coli</i> as a catalytically active, full length form that binds to bacterial membranes," <i>Eur. J. Biochem.</i> 202:161-165 (1991).				
	C4	Schmitt, M.P., Utilization of Host Iron Sources by <i>Corynebacterium diphtheriae</i> : Identification of a Gene Whose Product Is Homologous to Eukaryotic Heme Oxygenases and Is Required for Acquisition of Iron from Heme and Hemoglobin," <i>J. Bact.</i> 179(5):838-845 (1997)				
	C5	Rotenberg, M.O. et al., "Characterization of a cDNA-Encoding Rabbit Brain Heme Oxygenase-2 and Identification of a Conserved Domain among Mammalian Heme Oxygenase Isozymes: Possible Heme-Binding Site," <i>Archiv Biochem. Biophys.</i> 290(2) 336-344 (1991)				

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Substitute for form 1449A/PTO (Modified)				Complete if Known	
INFORMATION DISCLOSURE STATEMENT BY APPLICANT				Application Number	09/515,582
				Filing Date	02/29/2000
				First Named Inventor	Buelow, R.
				Group Art Unit	1632
				Examiner Name	Li, Q. J.
(use as many sheets as necessary)				Attorney Docket Number	A-63708-5/TAL/CYO
Sheet	2	of	2		

OTHER PRIOR ART - NON PATENT LITERATURE DOCUMENTS			
Examiner Initials	Cite No.	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.	7 ^o
	C6	Wilks, A. et al., "Rat Liver Heme Oxygenase: High Level Expression of a Truncated Soluble Form and Nature of the Meso-Hydroxylating Species," <i>J. Biol. Chem.</i> 268:22357-62 (1993)	
	C7	Schuller, D.J., "Crystal structure of heme oxygenase-1," <i>Nature Struct. Biol.</i> 6(9):860-867 (1999).	
	C8	Omata, Y. et al., "Crystallization and preliminary X-ray diffraction studies on the water soluble form of rat heme oxygenase-1 in complex with heme," <i>Acta. Cryst. D</i> 54:1017-1019 (1998).	
	C9	Hegazy, K.A. et al., "Functional human heme oxygenase has a neuroprotective effect on adult rat ganglion cells after pressure induced ischemia," <i>Regeneration and Transplantation</i> 11(6):1185-1189 (2000)	
	C10	Melo, L.G. et al., "Gene Therapy Strategy for Long-Term Myocardial Protection Using Adeno-Associated Virus Mediated Delivery of Heme Oxygenase Gene," <i>Circulation</i> 105:602-607 (2002)	
	C11	Juan, S-H. et al., Adenovirus-Mediated Heme Oxygenase-1 Gene Transfer Inhibits the Development of Atherosclerosis in Apolipoprotein E-Deficient Mice," <i>Circulation</i> 104:1519-1525 (2001).	
	C12	Lee, P.J. et al., "Overexpression of heme oxygenase-1 in human pulmonary epithelial cells results in cell growth arrest and increased resistance to hyperoxia," <i>Proc. Natl. Acad. Sci. USA</i> 93:10393-10398 (1996).	
	C13	Hori, R. et al., "Gene Transfection of H2SA Mutant Heme Oxygenase-1 Protects Cells against Hyperoxide-Induced Cytotoxicity," <i>J. Biol. Chem.</i> 277(12):10712-10718 (2002).	
	C14		
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